



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,227	08/13/2001	Stephen F. Gass	SDT 304	8817
27630	7590	05/22/2006	EXAMINER	
SD3, LLC			ALIE, GHASSEM	
25977 S.W. Canyon Creek Road, Suite G				
WILSONVILLE, OR 97070			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

C

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/929,227  
Filing Date: August 13, 2001  
Appellant(s): GASS ET AL.

**MAILED**  
**MAY 22 2006**  
**Group 3700**

---

David A. Fanning  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 03/03/06 appealing from the Office action mailed 10/04/05.

**1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

- a. Appeal of application serial number 09/929,221 (appeal brief filed, awaiting examiner's answer).
- b. Appeal of application serial number 09/929,238 (appeal brief filed, awaiting examiner's answer).
- c. Appeal of application serial number 09/929,240 (appeal brief filed, awaiting examiner's answer).
- d. Appeal of application serial number 09/929,242 (appeal brief filed, awaiting examiner's answer).
- e. Appeal of application serial number 09/929,425 (appeal brief filed, awaiting examiner's answer).
- f. Appeal of application serial number 09/929,426 (examiner reopened prosecution after appellant filed an appeal brief).
- g. Appeal of application serial number 10/053,390 (appeal brief filed, awaiting examiner's answer).
- h. Appeal of application serial number 10/100,211 (appeal brief filed,

awaiting examiner's answer).

- i. Appeal of application serial number 10/189,027 (appeal brief filed, awaiting examiner's answer).
- j. Appeal of application serial number 10/189,031 (appeal brief filed, awaiting examiner answer).
- k. Appeal of application serial number 10/243,042 (examiner reopened prosecution after appellant filed an appeal brief).
- l. Appeal of application serial number 10/292,607 (notice of appeal filed).

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,117,752	YONEDA	10-1978
4,653,189	ANDREASSON	03-1987

3,858,095	FRIEMANN et al.	12-1974
3,695,116	BAUR	10-1972
5,606,889	BIELINSKI et al.	03-1997
3,975,600	MARSTON	8-1976
5,453,903	CHOW	9-1995
2,957,166	GLUCK	10-1960
2,883,486	MASON	4-1959
2,452,589	MCWHIRTER	11-1948
2,402,232	BAKER	6-1946

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

A      Claims 1, 19 and 31 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Yoneda, U.S. Patent 4,117,752, in view of Andreasson, U.S. patent 4,653,189, and Friemann et al., U.S. Patent 3,858,095. Yoneda discloses the invention substantially as claimed, including an actuator having stored energy sufficient to move the brake component (a capacitor that is charged to discharge to power the brake). Yoneda lacks the specific actuator for bringing able to brake the cutting tool within approximately 3 milliseconds or less. However, Friemann et al. discloses that it is old and well known in the art to actuate braking of a cutting tool as fast as possible and more specifically within 5 milliseconds for the purpose of prevent injury to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to have the brake of Yoneda capable of actuation within 5 milliseconds in order to prevent injury to the user.

As to the specific 3 milliseconds, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a 3 millisecond instead of 5 milliseconds in order to increase the ability of the device to prevent accidents because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

In the alternative, even if it is argued that Yoneda lacks the stored energy capacitor, Andreasson discloses that it is old and well known in the art to use stored energy braking mechanisms, that is, electromechanical brakes with charged capacitors, for the purpose of providing an improved safety device on a cutting tool. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use stored energy with the braking mechanism of the device of Yoneda in order to provide an efficient, economical braking mechanism, as taught by Andreasson.

B. Claims 3-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda, in view of Andreasson and Friemann et al. as applied to claim 1 above, and further in view of Baur, U.S. Patent 3,695,116, and Bielinski, U.S. Patent 5,606,889.

The modified device of Yoneda discloses the invention substantially as claimed except for that the actuator includes a electromechanical but is silent as to the type of electromechanical device and therefore, it lacks an actuator with a spring, wherein a removably housing is coupled to the frame and housing the spring and brake.

Baur discloses that it is old and well known in the art to replace electro-

mechanical devices with spring loaded actuators that are electrically responsive by tensioned wires for the purpose of providing fast acting, less expensive, and smaller devices that providing large mechanical forces.

Bielinski discloses that it is old and well known in the art to use spring loaded actuators that use fusible members are contained in replaceable/removable cartridges for the purpose of facilitating efficiency of the operation of the device thereby allowing the user to quickly and easily replace used cartridges with new ones.

Furthermore, the examiner takes official notice that it is old and well known in The art to use to replace brakes and spring when .they are worn out or before they are worn out for the purpose of maintaining the effectiveness of the brake system of the cutting tool such that the user is protected.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to a removable housing comprising springs, brakes, and fusible members that enable actuation of a braking mechanism by a spring actuator in order to provide a fast acting, less expensive, smaller actuator that facilitates efficiency of the operation as taught by Baur and Bielinski, and such that the effectiveness of the braking system is maintained.

C. Claim 19 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda, U.S. Patent 4,1 17,752, in view of Friemann et al., U.S. Patent 3,858,095. Yoneda discloses the invention substantially as claimed, including, e.g., a cutting tool (14); a means for driving the cutting tool (10); means for detecting contact between a person and the tool (see column 1, lines 55-65); a brake component spaced apart

from the tool (20); and means for moving the brake (b1, see column 2, lines 30-40).

However, Yoneda lacks the specific braking within 3 milliseconds or less. Friemann et al. discloses that it is old and well known in the art to actuate braking of a cutting tool as fast as possible and more specifically within 5 milliseconds for the purpose of prevent injury to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the brake of Yoneda capable of actuation within 5 milliseconds in order to prevent injury to the user.

As to the specific 3 milliseconds, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a 3 millisecond instead of 5 milliseconds in order to increase the ability of the device to prevent accidents because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

#### **(10) Response to Argument**

The Declaration under 37 CFR 1 .132 filed 06/22/05 and submitted with the appeal brief has been considered but is insufficient to overcome the rejection of claims 1 and 3, 4, 19, and 31 based upon Yoneda in view of Friemann et al. and Andreasson. It should be noted that the declaration has been provided by appellant to support appellant's argument that it is physically impossible for the brake mechanism disclosed in Yoneda as modified by Friemann et al. to stop a band cutter within 5 milliseconds or less. The declaration under 37 CFR 1.132 is based upon the opinion of Dr. David A. Turcic. There appears to be only Dr. Turcic's opinion on how the device of Friemann et al. works

without documentations of any conducted physical tests. The declarant basis his conclusion on conjecture and not factual circumstances based on building the apparatus and testing it within parameters suggested by Friemann et al. It should be noted that Friemann et al discloses, “[e]xperiments have shown that with a protective circuit arrangement in accordance with the invention it is possible for a band cutter to be stopped in about 1/200<sup>th</sup> second.” The declaration does not provide any tests or experiments that prove that the brake mechanism in Yoneda, as modified by Friemann, is not capable of stopping the band cutter within 3 milliseconds.

Moreover, it is noted that appellant has not provided any affidavits or declarations under 37 CFR 1.132 from Friemann et al. and their assignee to strengthen the statement, “it is physically impossible for the brake mechanism disclosed in Friemann et al. to stop a band cutter within 3 milliseconds.”

Lastly, the Examiner has submitted the patents to Marston, Chow, Gluck, Mason, Mcwhirter, and Baker, as evidence to rebut Dr. Turcis’s statement that no relay does exist which can cause the brake to stop the band cutter disclosed in Friemann et al. within 5 milliseconds or less. These references were cited during prosecution to rebut the declaration and all the references have publications dates around the time Friemann et al. are published. It should be noted that there are relays exist that can operate within 1 millisecond as is evidenced by Marston, Chow, Gluck, Mason, Mcwhirter, and Baker. The brake mechanism in Friemann et al. is an electro-mechanical device and includes a relay. As stated above, a relay can operate within one millisecond. The operation of a relay in one millisecond surely causes the brake to stop the band saw within 5

milliseconds or less. Therefore, as suggested by Friemann et al., the brake mechanism can stop the band saw within 5 milliseconds.

As stated above, there are relays that exist which can operate within 1 millisecond as is evidenced by Marston, Chow, Gluck, Mason, Mcwhirter. Therefore, as stated in the rejection, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a 3 millisecond instead of 5 milliseconds, as taught by

Friemann et al. in order to increase the ability of the device to prevent accidents because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

It should be noted that the instant claims do not even include the relevant features which appellant is attempting to distinguish from the allegedly inoperative prior art. In this case, there is no structure in the instant claims that allow the brake mechanism to function in less than 5 milliseconds or 3 milliseconds. Nevertheless, it is asserted that the prior art is not inoperative and the declaration provides insufficient evidence to prove otherwise.

It should be noted that Appellant's arguments regarding the rejection are similar to the arguments in the appeal briefs for application No. 10/100,211 on 02/06/06.

Appellant argues that prior art lacks the specific structure/characteristic of the actuator for facilitating braking within 3 milliseconds. However, the examiner disagrees for the following reasons. The instant claims do not set forth any specific structure capable of facilitating braking within 3 milliseconds. Therefore, there is insufficient

structure to support this functional recitation in such way it defines itself over the prior art. The currently claim phrases are merely functional/intended use states without any significant structure to allow for 3 millisecond braking.

Appellant's argument that it would not have been obvious to enable the brake in Friemann to actuate within 3 milliseconds is not persuasive. As the technology has evolved, it has made possible for a person of ordinary skill in the art to enhance the structures of electro-mechanical brakes and stop them faster than ever. For example, electro-mechanical brakes in automobiles stop the wheels of the automobiles faster than ever. Therefore, it is within an ordinary skill in the art to enhance the electro-mechanical brake in Friemann et al. and stop the cutting to within approximately 3 milliseconds, instead of 5 milliseconds. In other words, the brake system in Friedmann, which can engage the cutting tool within 5 milliseconds in 1974, can be enhanced by the present technology in a way that the brake engages the blade 2 milliseconds faster.

Appellant's argument that there is no teaching in the cited references explaining how a capacitor as disclosed in Andreasson could power brakes disclosed in Yoneda is not persuasive. Both, Yoneda and Andreasson teach an electro-mechanical brake that stops a saw blade. Andreasson teaches that electro-mechanical brake takes its electric energy from the motor saw to stop the blade. The current or electric energy is stored in a capacitor. The capacitor is discharged through a coil to actuate the brake. Therefore, electro-mechanical brake in Yoneda can also be powered by a capacitor, as taught by Andreasson.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

**(12) Conclusion**

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ghassem Alie/GA

May 12, 2006

  
**BOYER D. ASHLEY**  
**SUPERVISORY PATENT EXAMINER**

Conferees:

  
Allan Shoap, SPE 3700

Boyer Ashley, SPE 3700

